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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hadwiger *et al.*  
Serial No. : 10/543,048  
Filed : July 21, 2005  
Title : LIPOPHILIC DERIVATIVES OF DOUBLE-STRANDED RIBONUCLEIC ACID

Art Unit : Unknown  
Examiner : Unknown

**MAIL STOP AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants request consideration of the references listed on the attached PTO-1449 form. Under 37 C.F.R. § 1.98 (a)(2)(ii), only copies of foreign patent documents and non-patent literature are enclosed. Copies of listed U.S. patents and U.S. patent-application publications can be provided upon request.

This statement is being filed before the receipt of a first Office Action on the merits. No fees are believed to be due. However, any necessary charges, or any credits, should be applied to Deposit Account No. 06-1050, referencing Attorney Docket No. 14174-109US1.

Respectfully submitted,

Date: February 7, 2006

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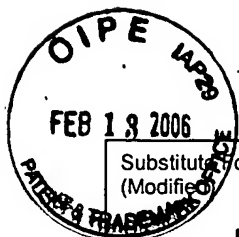
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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 14174-109US1	Application No. 10/543,048
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))		Applicant Hadwiger <i>et al.</i>	
		Filing Date July 21, 2005	Group Art Unit Unknown

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	4,868,116	09/19/1989	Morgan <i>et al.</i>			
	AB	4,980,286	12/25/1990	Morgan <i>et al.</i>			
	AC	6,054,299	04/25/2000	Conrad			
	AD	US 2003/0064492	04/03/2003	Manoharan <i>et al.</i>			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	BA	WO 89/02468	03/23/1989	WIPO				
	BB	WO 89/05345	06/15/1989	WIPO				
	BC	WO 89/07136	08/10/1989	WIPO				
	BD	WO 92/07573	05/14/1992	WIPO				
	BE	WO 00/22113	04/20/2000	WIPO				
	BF	WO 00/22114	04/20/2000	WIPO				
	BG	WO 00/44895	08/03/2000	WIPO			X	
	BH	WO 02/55693	07/18/2002	WIPO			X	

Other Documents (include Author, Title, Date, and Place of Publication)		
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	CA	"The chipping forecast " <i>Nature Genetics Supplement 21</i> (1999)
	CB	"The chipping forecast II" <i>Nature Genetics Supplement 32</i> (2002)
	CC	Armentano <i>et al.</i> , "Expression of human factor IX in rabbit hepatocytes by retrovirus-mediated gene transfer: Potential for gene therapy of hemophilia B" <i>Proc. Natl. Acad. Sci. USA</i> 87:6141-6145 (1990)
	CD	Basbaum <i>et al.</i> , "Focalized proteolysis: spatial and temporal regulation of extra cellular matrix degradation at the cell surface" <i>Curr. Opin. Cell Biol.</i> 8:731-738 (1996)
	CE	Benezra <i>et al.</i> , "The Id proteins and angiogenesis" <i>Oncogene</i> 20(58):8334-8341 (2001)
	CF	Berkner <i>et al.</i> , "Development of Adenovirus Vectors for the Expression of Heterologous Genes" <i>BioTechniques</i> 6(7):616-629 (1998)
	CG	Bijsterbosch, <i>et al.</i> , "Modulation of plasma protein binding and <i>in vivo</i> liver cell uptake of phosphorothioate oligodeoxynucleotides by cholesterol conjugation" <i>Nucl. Acids Res.</i> 28(14):2717-2725 (2000)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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Other Documents (include Author, Title, Date, and Place of Publication)		
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	CH	Birkedal-Hansen <i>et al.</i> , "Matrix Metalloproteinases: A Review" <i>Crit. Rev. Oral Biol. Med.</i> 4:197-250 (1993)
	CI	Boyd, "Invasion and metastasis" <i>Cancer Metastasis Rev.</i> 15(1):77-89 (1996)
	CJ	Brinckerhoff <i>et al.</i> , "Matrix metalloproteinases: a tail of a frog that became a prince" <i>Nature Reviews</i> 3:207-214 (2002)
	CK	Chao <i>et al.</i> , "BCL-2 FAMILY: Regulators of Cell Death" <i>Annu. Rev. Immunol.</i> 16:395-419 (1998)
	CL	Childs <i>et al.</i> , "The MDR Superfamily of Genes and Its Biological Implications" <i>Imp. Adv. Oncol.</i> 21-36 (1994)
	CM	Chiu, <i>et al.</i> , "RNAi in Human Cells: Basic Structural and Functional Features of Small Interfering RNA" <i>Mol. Cell</i> 10:549-561 (2002)
	CN	Chothia <i>et al.</i> , "The Molecular Structure of Cell Adhesion Molecules" <i>Annu. Rev. Biochem.</i> 66:823-862 (1997)
	CO	Chowdhury <i>et al.</i> , "Long-Term Improvement of Hypercholesterolemia After <i>Ex Vivo</i> Gene Therapy in LDLR-Deficient Rabbits" <i>Science</i> 254:1802-1805 (1991)
	CP	Cone <i>et al.</i> , "High-efficiency gene transfer into mammalian cells: Generation of helper-free recombinant retrovirus with broad mammalian host range" <i>Proc. Natl. Acad. Sci. USA</i> 81:6349-6353 (1984)
	CQ	Cornetta <i>et al.</i> , "Safety Issues Related to Retroviral-Mediated Gene Transfer in Humans" <i>Human Gene Therapy</i> 2:5-14 (1991)
	CR	Couture <i>et al.</i> , "Anti-gene therapy: the use of ribozymes to inhibit gene function" <i>TIG</i> 12(12):510-515 (1996)
	CS	Czaderna <i>et al.</i> , "Structural variations and stabilizing modifications of synthetic siRNAs in mammalian cells" <i>Nucleic Acids Research</i> 31:2705-2716 (2003)
	CT	D'Ari, "Cycle-regulated genes and cell cycle regulation" <i>BioEssays</i> 23(7):563-565 (2001)
	CU	Dai <i>et al.</i> , "Gene therapy via primary myoblasts: Long-term expression of factor IX protein following transplantation <i>in vivo</i> " <i>Proc. Natl. Acad. Sci. USA</i> 89:10892-10895 (1992)
	CV	Danos <i>et al.</i> , "Safe and efficient generation of recombinant retroviruses with amphotropic and ecotropic host ranges" <i>Proc. Natl. Acad. Sci. USA</i> 85:6460-6464 (1988)
	CW	Deller <i>et al.</i> , "Cell Surface Receptors" <i>Curr. Opin. Struct. Biol.</i> 10(2):213-219 (2000)
	CX	Eglitis <i>et al.</i> , "Gene Expression in Mice After High Efficiency Retroviral-Mediated Gene Transfer" <i>Science</i> 230:1395-1398 (1985)
	CY	Ferry <i>et al.</i> , "Retroviral-mediated gene transfer into hepatocytes <i>in vivo</i> " <i>Proc. Natl. Acad. Sci. USA</i> 88:8377-8381 (1991)
	CZ	Fotedar <i>et al.</i> , "Apoptosis and the cell cycle" <i>Prog. Cell Cycle Res.</i> 2:147-163 (1996)
	DA	Gould <i>et al.</i> , "Angiogenesis: An Expanding Universe" <i>Hum. Pathol.</i> 33(11):1061-1063 (2002)
	DB	Hammond <i>et al.</i> , "An RNA-directed nuclease mediates post-transcriptional gene silencing in <i>Drosophila</i> cells" <i>Nature</i> 404:293-296 (2000)
	DC	Hanahan <i>et al.</i> , "The Hallmarks of Cancer" <i>Cell</i> 100:57-70 (2000)

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	DD	Hsu <i>et al.</i> , "Immunogenicity of Recombinant Adenovirus-Respiratory Syncytial Virus Vaccines with Adenovirus Types 4, 5, and 7 Vectors in Dogs and a Chimpanzee" <i>J. Infectious Disease</i> 166:769-775 (1992)
	DE	Huber <i>et al.</i> , "Retroviral-mediated gene therapy for the treatment of hepatocellular carcinoma: An innovative approach for cancer therapy" <i>Proc. Natl. Acad. Sci. USA</i> 88:8039-8043 (1991)
	DF	Hwu <i>et al.</i> , "Functional and Molecular Characterization of Tumor-Infiltrating Lymphocytes Transduced with Tumor Necrosis Factor- $\alpha$ cDNA for the Gene Therapy of Cancer in Humans" <i>J. Immunol.</i> 150(9):4104-4115 (1993)
	DG	Jackson <i>et al.</i> , "Expression profiling reveals off-target gene regulation by RNAi" <i>Nature Biotech.</i> 21:635-638 (2003)
	DH	Jansen <i>et al.</i> , "Chemosensitisation of malignant melanoma by <i>BCL2</i> antisense therapy" <i>The Lancet</i> 356:1728-1733 (2000)
	DI	Kay <i>et al.</i> , "Hepatic Gene Therapy: Persistent Expression of Human $\alpha 1$ -Antitrypsin in Mice after Direct Gene Delivery <i>In Vivo</i> " <i>Human Gene Therapy</i> 3:641-647 (1992)
	DJ	Krepela, "Cysteine proteinases in tumor cell growth and apoptosis" <i>Neoplasia</i> 48(5):332-349 (2001)
	DK	Manoharan, "Oligonucleotide Conjugates as Potential Antisense Drugs with Improved Uptake, Biodistribution, Targeted Delivery and Mechanism of Action" <i>Antisense and Nucleic Acid Drug Development</i> 12:103-128 (2002)
	DL	Matrisian, "Cancer biology: Extracellular proteinases in malignancy" <i>Curr. Biol.</i> 9(20):R776-778 (1999)
	DM	Mendelsohn <i>et al.</i> , "The EGF receptor family as target for cancer therapy" <i>Oncogene</i> 19(56):6550-6565 (2000)
	DN	Mignatti <i>et al.</i> , "Biology and Biochemistry of proteinases in Tumor Invasion" <i>Physiol. Rev.</i> 73:161-195 (1993)
	DO	Müllauer <i>et al.</i> , "Mutations in apoptosis genes: a pathogenetic factor for human disease" <i>Mutat. Res.</i> 488(3):211-231 (2001)
	DP	Muzyczaka, "Use of Adeno-Associated Virus as a General Transduction Vector for Mammalian Cells" <i>Curr. Topics Micro. Immunol.</i> 158:97-129 (1992)
	DQ	Normanno <i>et al.</i> , "The role of EGF-Related Peptides in Tumor Growth" <i>Front. Biosci.</i> 6:D685-707 (2001)
	DR	Norton, "ID helix-loop-helix proteins in cell growth, differentiation and tumorigenesis" <i>J. Cell Sci.</i> 113(22):3897-3905 (2000)
	DS	Nykänen <i>et al.</i> , "ATP requirements and small interfering RNA structure in the RNA interference pathway" <i>Cell</i> 107:309-321 (2001)
	DT	Parise <i>et al.</i> , "New aspects of integrin signaling in cancer" <i>Semin. Cancer Biol.</i> 10(6):407-414 (2000)
	DU	Pinkert <i>et al.</i> , "An albumin enhancer located 10 kb upstream functions along with its promoter to direct efficient, liver-specific expression in transgenic mice" <i>Genes Dev.</i> 1:268-276 (1987)
	DV	Prusiner <i>et al.</i> , "Prion Protein Biology" <i>Cell</i> 93(3):337-348 (1998)
	DW	Ramirez <i>et al.</i> , "Nucleotidephospholipids: Oligonucleotide Derivatives with Membrane-Recognition Groups" <i>J. Am. Chem. Soc.</i> 104:5483-5486 (1982)

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	DX	Reed, "Mechanisms of Apoptosis" <i>Am. J. Pathol.</i> 157(5):1415-1430 (2000)
	DY	Rosenfeld <i>et al.</i> , "In Vivo Transfer to the Human Cystic Fibrosis Transmembrane Conductance Regulator Gene to the Airway Epithelium" <i>Cell</i> 68:143-155 (1992)
	DZ	Rosenfeld <i>et al.</i> , "Adenovirus-Mediated Transfer of a Recombinant a1-Antitrypsin Gene to the Lung Epithelium in Vivo" <i>Science</i> 252:431-434 (1991)
	EA	Rubinstein <i>et al.</i> , "Recent Advances in Cytokines, Cytokine Receptors and Signal Transduction" <i>Cytokine Growth Factor Rev.</i> 9(2):175-181 (1998)
	EB	Safar <i>et al.</i> , "Molecular studies of prion diseases" <i>Prog. Brain Res.</i> 117:421-434 (1998)
	EC	Schwarz <i>et al.</i> , "Evidence that siRNAs Function as Guides, Not Primers, in the <i>Drosophila</i> and Human RNAi Pathways" <i>Mol. Cell</i> 10:537-548 (2002)
	ED	Shea <i>et al.</i> , "Synthesis, hybridization properties and antiviral activity of lipid-oligodeoxynucleotide conjugates" <i>Nucl. Acids Res.</i> 18:3777-3783 (1990)
	EE	Skorski <i>et al.</i> , "Suppression of Philadelphia <sup>1</sup> leukemia cell growth in mice by <i>BCR-ABL</i> antisense oligodeoxynucleotide" <i>Proc. Natl. Acad. Sci. USA</i> 91:4504-4508 (1994)
	EF	Stetler-Stevenson <i>et al.</i> , "Tumor Cell Interactions with the Extracellular Matrix During Invasion and Metastasis" <i>Annu. Rev. Cell Biol.</i> 9:541-573 (1993)
	EG	Strasser <i>et al.</i> , "Apoptosis Signaling" <i>Annu. Rev. Biochem.</i> 69:217-245 (2000)
	EH	Tetko <i>et al.</i> , "Prediction of <i>n</i> -Octanol/Water Partition Coefficients from PHYSPROP Database Using Artificial Neural Networks and E-State Indices" <i>J. Chem. Inf. Comput. Sci.</i> 41:1407-1421 (2001)
	EI	Tuschl <i>et al.</i> , "Small interfering RNAs: a revolutionary tool for the analysis of gene function and gene therapy" <i>Molecular Interventions</i> 2:158-167 (2002)
	EJ	Van Beusechem <i>et al.</i> , "Long-term expression of human adenosine deaminase in rhesus monkeys transplanted with retrovirus-infected bone-marrow cells" <i>Proc. Natl. Acad. Sci. USA</i> 89:7640-7649 (1992)
	EK	Wacheck <i>et al.</i> , "Small Interfering RNA Targeting Bcl-2 Sensitives Malignant Melanoma" <i>Oligonucleotides</i> 13:393-400 (2003)
	EL	Wilson <i>et al.</i> , "Retrovirus-mediated transduction of adult hepatocytes" <i>Proc. Natl. Acad. Sci. USA</i> 85:3014-3018 (1988)
	EM	Wincott <i>et al.</i> , "Synthesis, deprotection, analysis and purification of RNA and ribozymes" <i>Nucleic Acids Res.</i> 23(14):2677-2684 (1995)
	EN	Yokota, "Tumor progression and metastasis" <i>Carcinogenesis</i> 21:497-503 (2000)

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